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authorization of payment by the first network for the use by the user of the packet data network, the second network transmits to the first network authentication information granting the user authentication to obtain connection through the second network to the packet data network, and the first network transmits to the user authentication information which informs the user that authentication to obtain connection to the packet data network has been obtained; and

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after the user is informed that authentication to obtain connection to the packet data network has been obtained, the user transmits to the second network at least one request for consumption of at least one service unit and the second network debits from a stored value of service units which are granted to the user a consumed number of service units.

25. (New) A system in accordance with claim 24 wherein:

the number of consumed service units are identified in each request for consumption of at least one service unit until the number of consumed service units equals a number of granted units.

REMARKS

The invention is a method of obtaining connection to a packet data network and a system. In accordance with the invention, a user 12 inputs a request to a first network 18 which requests that the user be authorized for connection to the packet data network 14 through a second work 16. The user request and an authorization of payment is transmitted from the first network to the second network for the use by the user of the packet data network. Network

authentication information, which may be a unique random number RAND, a signed response RES, and a cipher key Kc, is used to grant the user authentication to obtain connection through the second network packet data network. The authentication information is transmitted from the first network to the user which informs the user that authentication to obtain connection to the packet data network has been obtained. Furthermore, as illustrated in Fig. 2, the second network debits from a stored value of service units which have been granted to the user a number of consumed units which are identified in each request for consumption of at least one service unit until the number of consumed service units equals the number of granted service units.

Prior to the invention, as described in the specification under the "Description of the Prior Art", a problem existed when a user wished to obtain service from a packet data network while remaining anonymous or where there was no roaming agreement permitting the user to be billed while roaming from the user's home network to the second network and through which the user is connected to the packet data network. This situation required alternative billing arrangements to which the invention is addressed. See the first full paragraph on page 2 of the specification.

Claims 1, 13, and 21 stand rejected under 35 U.S.C. §103 as being unpatentable over United States Patent 6,167,513 (Inoue et al) in view of United States Patent 6,173,407 (Yoon et al). The Examiner reasons that Inoue et al disclose a method of obtaining connection to a packet data network comprising inputting a user request to a first network which requests that the user be authorized for connection to the packet data network through a second network

and further discloses transmitting from the first network to the second network the user request and authorization. The Examiner acknowledges that Inoue et al fail to disclose an authorization of payment. Yoon et al have been cited as disclosing an authorization of payment. As a result, the Examiner reasons that it is obvious to combine the teachings of Inoue et al and Yoon et al to arrive at the subject matter of claims 1, 13 and 21. This ground of rejection is traversed for the following reasons.

Inoue et al disclose a methodology of providing a mobile computer the ability to obtain cipher communications while moving through interconnected networks, such as the network illustrated in Fig. 3. The methodology pertains solely to the problem of mobility (not payment to which the claims are addressed) in which communications are transmitted between networks through gateways utilizing entities in the home network, such as the home agent, illustrated in Fig. 3. Claim 1 recites "inputting a future request to a first network which requests that the network be authorized for connection to the packet data network through a second network; transmitting from the first network to the second network the user request and the authorization of payment to the second network by the first network for the use by the user of the packet data network; transmitting from the second network to the first network authentication information granting the user authentication to obtain connection through the second network to the packet data network" and in claim 21 recites "the first network, in response to a user request to the first network that the user be authorized for connection to the packet data network through the second network, transmits to the second network the user request and an authorization of payment by the first network for the use by the

user of the packet data network, the second network transmits to the first network authentication information granting the user authentication to obtain connection through the second network to the packet data network, and the first network transmits to the user authentication information which informs the user that authentication to obtain connection to the packet data network has been obtained". Clearly, as the Examiner has recognized, Inoue et al do not pertain closely to the subject matter of independent claims 1 and 21 which, as highlighted above, is addressed to payment. At most, Inoue et al disclose a network topology which has some similarity to that of the claimed invention but not to payment in the network topology.

The citation of Yoon et al does not cure the deficiencies noted above with regard to Inoue et al. Yoon et al disclose a method of authenticating and charging a client using a web info shop service system to authenticate the client and further perform charging tasks. See column 2, lines 1-9. Yoon et al provide access to the charged content provider 206 via the Internet to a client computer 201. The web info shop 205 authenticates the client and performs charging tasks. The client computer 201, web info shop 205 and charged content provider 206 are not counterparts to that of the present invention involving first, second and packet data networks.

The Examiner merely states that Yoon et al discloses an authorization of payment. This is correct but the authorization of payment is not sufficiently relevant to the subject matter of claims 1 and 21 as quoted above regarding payments involving transmitting from the first network to the second network the user request and an authorization of payment to the second network by the first

network for the use of the user of the packet data network to motivate a person of ordinary skill in the art to arrive at the claimed subject matter. The web info shop 205 is not analogous to the transmitting from a first network to the second network the user request and an authorization of payment to the second network by the first network for the use by the user of the packet data network as recited in claims 1 and 21. At most, Yoon et al disclose a mechanism for providing payment by an entity in a network other than the charged content provider 206 and would not motivate a person of ordinary skill in the art to arrive at the subject matter of dependent claims 1 and 21.

Furthermore, the proposed combination is clearly based upon hindsight. The Examiner's rationale appears to be that in view of Yoon et al, authorization of payment is *per se* obvious in any network architecture. However, Yoon et al, as stated above, does not pertain to the claimed network topology of a first user, a first network, a set network, and a packet data network and specifically, a mechanism how to secure payment to the second network by the second network for use by the user of the packet data network.

Claim 13 further limits claim 1 in reciting the inputting of the user request to the first network, the transmitting of the user request and an authorization of payment to the second network, and the transmitting of the authentication information from the second network to the first network and to the user are by secure communications. This subject matter is not obvious for the reasons set forth above with regard to claims 1 and 21.

Furthermore, the rejection of claims 2-3, 7-8 and 14-15 over the combination of Inoue et al, Yoon et al and further in view of United States Patent

5,659,541 (Chan) is traversed. The deficiencies of the combination of Inoue et al and Yoon et al are not remedied by the citation of Chan which the Examiner has relied upon with regard to quantification of connectivity.

Claims 4, 9 and 16, stand rejected under 35 U.S.C. §103 as being unpatentable over Inoue et al, Yoon et al, Chan and further in view of Michel Mouley et al, which apparently is a publication which has not been made of record. It is requested that the Examiner provide a copy of the Mouley et al publication and make it of record in the PTO Form 892 in the next Office Action. The discussion of Mouley et al, even if correct, does not remedy the problem with the combination of Inoue et al and Yoon et al.

Claims 11 and 12 stand rejected under 35 U.S.C. §103 as being unpatentable over Inoue et al in view of Yoon et al and Chan and further in view of Mouley et al. This ground of rejection is traversed for the same reasons set forth above with regard to claims 4, 9 and 16.

Claim 18 stands rejected under 35 U.S.C. §103 as being unpatentable over Inoue et al in view of Yoon et al and Chan, further in view of United States Patent 5,345,506 (Tsubakiyama et al). This ground of rejection is traversed for the reasons set forth above with regard to the rejection of claims 1, 13, and 21 and furthermore, for the reasons that Tsubakiyama et al do not cure the deficiencies noted above with regard to the combination of Inoue et al and Yoon et al for the reason that Tsubakiyama et al has been cited for disclosing determination if a match exists and if the match exists, the second network permits data packets to pass through the first network between the user and the packet network.

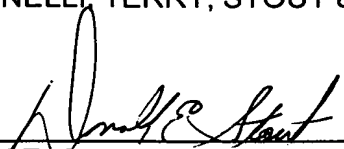
Newly submitted independent claims 22 and 24 correspond respectively the subject matter of claims 1 and 24 and further, recite subject matter partially found in claim 19. Claims 22 and 24 recite that after the user is informed that authentication to obtain connection to the packet data network has been obtained, the user transmits to the second network at least one request for consumption of at least service unit and the second network debits from a stored value of service units which are granted to the user a consumed number of service units. This subject matter more specifically defines the payment mechanism recited in independent claims 1 and 21 which is not rendered obvious by the combination of Inoue et al and Yoon et al. As described above, Inoue et al and Yoon et al do not pertain to the basic payment mechanism recited in the independent claims 1 and 21 with newly submitted claims 22 and 24 being more specific and limited in reciting more specific subject matter regarding the consumption of service units as a mechanism for paying. The subject matter is not rendered obvious by the prior art discussed above. Furthermore, dependent claims 23 and 25 recite that the number of consumed service units are identified in each request for consumption of at least one service unit until the number of consumed service units equals the number of granted units which is recited in claim 19. It is submitted that the subject matter of claims 23 and 25 is further not obvious in that it more specifically defines the consumption of service units than set forth in independent claims 22 and 24 which is not rendered obvious by Inoue et al and Yoon et al.

In view of the foregoing amendments and remarks, it is submitted that each of the claims in the application is in condition for allowance. Accordingly, early allowance thereof is respectfully submitted.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (017.37066X00) and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGE MADE
ACCOMPANYING AMENDMENT OF FEBRUARY 11, 2002**

IN THE SPECIFICATION:

The paragraph at page 10, beginning on line 17 has been replaced as follows:

The public security server 26 calculates the n service units and stores them in a first list which may be preferably a hash table storing the number of unused service units. Furthermore a second list, which may preferably be a hash table, accounts for consumed service units from the n authorized service units. Alternatively, the second list may be eliminated by deleting the consumed service units from the first list as they are consumed. The hash tables, which rely upon well-known hashing functions ~~which are well known and~~ are not described in detail in view of their known status, provide a unique address for locating all of the n authorized service units during their history from authorization to consumption. During the consumption phase, as described below in Fig. 2, the unused and used service units are accounted for in order to insure that only the purchased amount of connectivity (time or monetary value) of the user 12 to the packet data network 14 occurs.

IN THE CLAIMS:

New claims 22-25 were added.